
IIBA Vancouver BC Chapter
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by Gladys Lam

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BRSolutions.com

Publisher, Business Rules Journal
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Ms. Lam is a world-renowned expert on business project management, having managed numerous projects that focus on the large-scale capture, analysis and management of business rules and decisions. She works comfortably with senior executives providing insights and advice. She advises senior management of large companies on organizational issues and on business solutions to business problems. She is most effective with mentoring and training business analysts worldwide.

Ms. Lam is most recognized for her ability to identify the source of business issues, and for her effectiveness in developing pragmatic approaches to resolve them. She has gained a world-class reputation for fostering positive professional relationships with principals and support staff in projects.

Ms. Lam graduated from the University of British Columbia with a B.S. in Computer Science.
Building Business Solutions
Business Analysis with Business Rules

An IIBA® Sponsored Handbook

Business Rule Concepts
Getting to the Point of Knowledge


Primer Trio
Decision Analysis
Decision Tables
RuleSpeak® 3.0

brsolutions.com
(free)
to be discussed this session

- the role of business processes
- the role of business rules and decisions
- business terminology
- business process vs. requirements
- business rules vs. requirements
smart
business
processes
about business processes
business process: the business tasks required for an enterprise to satisfy a planned response to a business event from beginning to end with a focus on the roles of actors, rather than the actors’ day-to-day job
‘process’ - business perspective

- is triggered by an external event involving a stakeholder
- is comprised of all the actions necessary to provide the appropriate business outcomes
- transforms inputs into outputs according to guidance (policies, standards, procedures, rules, etc.) employing resources of all types
- contains logical steps which usually cross functions and often organizational units
- delivers a product or service to an external stakeholder or other internal process
Take plane trip

Check-in Agent
- Check In

Gate Agent
- Board Plane

Pilot
- Fly Plane

Stewardess
- Provide Service

Luggage Handler
- Deliver Luggage
• is triggered by an external event involving a stakeholder
is comprised of all the actions necessary to provide the appropriate business outcomes
transforms inputs into outputs according to guidance (policies, standards, procedures, rules, etc.) employing resources of all types

- An international passenger must show passport.
- Passenger name on reservation must match name on passport.
contains logical steps which usually cross functions and often organizational units
• delivers a product or service to an external stakeholder or other internal process
about smart business processes
+ smarts to processes

- Process lets you interact with customers, but doesn’t guarantee those interactions are the best possible.
- Process produces things, but doesn’t ensure you produce the right things.
- Process pays the bills, but doesn’t find you new money.
- Process lets you play the game, but doesn’t determine whether you will win.
business capabilities: the missing piece
What makes business smart?
- Strategy
- Business concepts
- Business rules
- Operational business decisions
- Key performance indicators

Business capabilities: the complete picture
+ smarts to processes

- business rules
- core business concepts
- operational business decisions
- strategy
- policy monitors (KPIs)
about business rules and operational business decisions
what is a business rule
Is this a business rule?

Provide a feature to handle electronic funds transfer.
Is this a business rule?

Provide a feature to handle electronic funds transfer.

... requirement
Is this a business rule?

Customer provides account id.
System displays account.
Is this a business rule?

Customer provides account id.
System displays account.

... use case statements
Is this a business rule?

If the overdrawn flag is set to ‘yes’, reject transaction.
Is this a business rule?

If the overdrawn flag is set to ‘yes’, reject transaction.

... system if/then statement
definition

business rule: criterion used in business operations to ...

• guide behavior
• shape judgments
• make decisions
requirement
Provide a feature to handle electronic funds transfer.

business rule
Every employee expense reimbursement must be processed through electronic funds transfer.
**use case statement**

Customer provides account id.
System displays account.

---

**business rule**

A customer must have a valid account.
system if/then statement
If the overdrawn flag is set to ‘yes’, reject transaction.

business rules
1. An account must not be overdrawn.
2. An account may be considered overdrawn only if cash withdrawal is greater than the current balance of the account.
business rules for making operational business decisions

decision rules

behavioral rules vs. decision rules

behavioral rules

business rules for coordinating day-to-day business activity

decision made here
business rules for making operational business decisions involve …
- answering the question, “What’s the best or optimal outcome for this case?”
- applying specialized expertise and accumulated practical skill
- lots of decision tables

business rules about business activity involve …
- answering the question, “Are we doing things best for the business process as a whole?”
- coordinating collective activity, applying sound business practices, and monitoring for violations
- lots of individual (one-off) business rules

your business rules space
Get Ready to Go to Work

1. **Wash Up**
   - Is it a work day?
     - yes: **Wear Suit**
     - no: **Wear Jeans**

2. **Wear Jeans**
   - Is it cold?
     - yes: **Wear Sweater**
     - no: **Wear Silk Blouse**

3. **Wear Silk Blouse**
   - Is it raining?
     - yes: **Wear Rain Coat**
     - no: **Am I late?**
       - yes: **Drive Car**
       - no: **Take Bus**
**Get Ready to Go to Work**

**determine what to wear**

1. **Wash Up**
2. **Is it a work day?**
   - yes: **Wear Suit**
     - no: **Wear Jeans**
6. **Is it cold?**
   - yes: **Wear Sweater**
     - no: **Wear Silk Blouse**
11. **Is it raining?**
    - yes: **Wear Rain Coat**
    - no: **Take Bus**
12. **Am I late?**
   - yes: **Drive Car**
   - no: **Take Bus**
Get Ready to Go to Work

Me

Wash Up → Determine what to wear → Determine means of transportation

after extracting business rule
case study
case study

Manage leave applications
The workflow describes an employee submitting a leave application for approval.

A leave policy exists and needs to be adhered to.

The policy states that two levels of approval are required.
a typical process model
what we found

- The main information was a process map in a Word document and some requirements
- It was obviously targeted towards an IT system.
- Only some business rules were mentioned but many questions remained.
1st iteration
- renamed task name: verb + noun
- removed diamonds: externalize business rules from your business process
- focused on business tasks: removed task that does not do any work
- removed system swim lane: system requirements will come later
- Two levels of approval are needed for leave requests.
- Both, the line manager and assigned deputy receive notification of leave request.
- Every request shall be sent to HR administrator for review after line manager’s approvals.
- When the total number of leave exceeds or equals 6 days, the approval of the General Manager is required.
- For level 1 applicants the system shall send the request directly to CEO for approval.
- The leave balance must not be less than -5 days after approval of leave request.
- Leave accrued in previous financial year must be taken within 3 month of new financial year.

unstructured business rules
business process and business rules working together
Two levels of approval are needed for leave requests.

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Leave accrued in previous financial year must be taken within 3 month of new financial year.
2nd iteration
- added actors mentioned in business rules

Introduced duplication and complexity
let the business rules do the work
where are the business rules?
business vocabulary
Payment Information:

For your security, we use standard SSL encryption to protect the transfer of your payment information. If you would prefer to complete your purchase via phone visit our phone order page. Read our privacy policy.

Redemption Options: Need help?

- Nothing to redeem.
- Redeem a gift certificate.
- Redeem a travel certificate.

Payment Options:

- Credit/Debit Card
- Bill Me Later®
- PayPal
- Online Check
- Cash

What is Bill Me Later®?

CUSTOMER CARE CERTIFICATE

CERTIFICATE

Please note this electronic certificate is not a ticket.

Lam Gladys S

Number of Certificates 1
Issued Date 4/23/2009
Total Value 500.00

Promotion Code 09TCVA
Expiration Date 4/23/2010
Certificate PIN 79USF68

Original Ticket Number 0056666666666666

Note: Valid toward the purchase of one electronic ticket, where eligible, on Continental up to $500.00
Payment Information:

For your security, we use standard SSL encryption to protect the transfer of your payment information. If you would prefer to complete your purchase via phone visit our phone order page.

Read our privacy policy.

Redemption Options: Need help?

- Nothing to redeem.
- Redeem a gift certificate.
  Gift Certificate Number: [Field]
- Redeem a travel certificate.

Payment Options:

- Credit/Debit Card
- Bill Me Later®
- PayPal
- Online Check
- Cash

[Logos for MasterCard, VISA, Discover, American Express, UATP, JCB]

What is Bill Me Later®?

CUSTOMER CARE CERTIFICATE

CERTIFICATE

Please note this electronic certificate is not a ticket.

Lam Gladys S

[Barcode]

Number of Certificates: 1
Issued Date: 4/23/2009
Total Value: 500.00

Promotion Code: 09TCVA
Expiration Date: 4/23/2010
Certificate PIN: 79USF68

Original Ticket Number: 0056666666666

Note: Valid toward the purchase of one electronic ticket, where eligible, on Continental up to $500.00
Payment Information:
For your security, we use standard SSL encryption to protect the transfer of your payment information. If you would prefer to complete your purchase via phone visit our phone order page. Read our privacy policy.

Redemption Options: Need help?
- Nothing to redeem.
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Total Value: $500.00
Promotion Code: 09TCVA
Expiration Date: 4/23/2010
Original Ticket Number: 00566666666666
Certificate PIN: 79USF68

Note: Valid toward the purchase of one electronic ticket, where eligible, on Continental up to $500.00
A gift certificate must not exceed $1,000.
A travel certificate must not exceed $2,000.
A customer care certificate must not exceed $3,000.
Two levels of approval are needed for leave requests.

Both, the line manager and assigned deputy receive notification of leave request.

Every request shall be sent to HR administrator for review after line manager’s approvals.

When the total number of leave exceeds or equals 6 days, the approval of the General Manager is required.

For level 1 applicants the system shall send the request directly to CEO for approval.

The leave balance must not be less than -5 days after approval of leave request.

Leave accrued in previous financial year must be taken within 3 month of new financial year.
coordinate business vocabulary
let the business rules do the work
**Leave Request Process**

**What is a duration for a leave type?**

<table>
<thead>
<tr>
<th>Leave Type</th>
<th>Employment Period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Probability</td>
</tr>
<tr>
<td>Vacation Leave</td>
<td>0</td>
</tr>
<tr>
<td>Sick Leave</td>
<td>0</td>
</tr>
<tr>
<td>Paternity Leave</td>
<td>0</td>
</tr>
<tr>
<td>Compassionate Leave</td>
<td>0</td>
</tr>
<tr>
<td>Leave Without Pay</td>
<td>0</td>
</tr>
</tbody>
</table>

*decision table are business rules too*
managing business rules
<table>
<thead>
<tr>
<th>Leave Request Process</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Uses Rule Group(s)</strong></td>
</tr>
<tr>
<td><strong>Submit Leave Request</strong></td>
</tr>
<tr>
<td><strong>Review Leave Request</strong></td>
</tr>
<tr>
<td><strong>Confirm Leave Request Outcome</strong></td>
</tr>
<tr>
<td><strong>Notify Applicant</strong></td>
</tr>
</tbody>
</table>
Submit Leave Request

Uses Rule(s)

Rule 22 A leave request must be signed by the applicant.

Rule 21 An applicant's new leave balance must be -5 days or higher.

Rule 13 A new leave balance is calculated as current leave balance minus the number of days in leave request.

Review Leave Request

Uses Rule Group(s)

Distribution Rules

Approval Rules

Distribution Rules

Uses Rule(s)

Rule 14 A leave request approved by a line manager must also be approved by an HR administrator.

Rule 11 A leave request must be approved by a General Manager if the number of days of leave request exceeds or equals 6 days.

Rule 15 A leave request must be approved by the CEO if the applicant is a level 1 employee.

Approval Rules

Uses Rule(s)

Rule 25 A level 1 employee must not take leave from February 1 to April 30.

Rule 27 A leave request must not be more than 20 days.

Rule 21 An applicant's new leave balance must be -5 days or higher.

Rule 13 A new leave balance is calculated as current leave balance minus the number of days in leave request.

grouping business rules
### Confirm Leave Request Outcome

**Uses Rule(s)**

- **Rule 20**: Each *leave request* must have at least 2 *leave request* reviews.
- **Rule 19**: Each *leave request* review must be signed by the reviewer of the *leave request*.

### Notify Applicant

**Uses Rule(s)**

- **Rule 16**: A *leave request* must be considered denied if any one of the *leave request*...
A level 1 employee must not take leave from February 1 to April 30.

Click once on an underlined term to view its definition here.

### A. Representation

**Status:** Approved

**Responsible Party:** CEO

**Kind of Responsible Party:** Owner

### C. Documentation

**Comment:** Level 1 employees are crucial to company operation.

**Motivation:** Peak season. Company generates 80% revenue during this period

### D. Sources

### E. Applicability

know why
business processes, business rules and requirements
<table>
<thead>
<tr>
<th>Business Process (step)</th>
<th>Business Rule</th>
<th>Requirement</th>
</tr>
</thead>
</table>
| Submit leave request    |               | ▪ ability to submit and review leave requests using: 1. a website, 2. tablets and 3. smart phones  
▪ ability to view previous leave requests, reviews and employment history  
▪ ability to view leave policy |
|                         | ▪ A leave request must be signed by the applicant.  
▪ An applicant's new leave balance must be -5 days or higher.  
▪ A new leave balance is calculated as current leave balance minus the number of days in leave request. | ▪ ability to accept electronic signature  
▪ ability to calculate new leave balance  
▪ ability to detect business rule violation |
<table>
<thead>
<tr>
<th>Business Process (step)</th>
<th>Business Rule</th>
<th>Requirement</th>
</tr>
</thead>
</table>
| Review leave request   | ▪ A leave request must be approved by a line manager.  
▪ A leave request approved by a line manager must also be approved by an HR administrator.  
▪ A leave request must be approved by a General Manager if the number of days of leave request exceeds or equals 6 days.  
▪ A leave request must be approved by the CEO if the applicant is a level 1 employee. | ▪ ability to send notification to appropriate reviewers  
▪ ability to approve leave request by one click of button only |
<p>|                        | ▪ A reason must be provided if the leave request outcome is ‘denied’ | ▪ ability to capture reason if the leave request review outcome is ‘denied’ |</p>
<table>
<thead>
<tr>
<th>Business Process (step)</th>
<th>Business Rule</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirm leave request outcome</td>
<td>▪ Each leave request must have at least 2 leave request reviews.</td>
<td>▪ ability to view all leave request review by reviewers, by applicant, or by date</td>
</tr>
<tr>
<td></td>
<td>▪ Each leave request approval must be signed by the reviewer of the leave request.</td>
<td>▪ ability to notify reviewer if review is incomplete</td>
</tr>
<tr>
<td>Business Process (step)</td>
<td>Business Rule</td>
<td>Requirement</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td>verb + noun = action</td>
<td>rule words (must, only) = obligation</td>
<td>ability to = demand on system design</td>
</tr>
<tr>
<td></td>
<td>question statement = choice</td>
<td></td>
</tr>
</tbody>
</table>
stable business processes

+ dynamic business rules

= smart agile business
Business Process
- About efficiency in operations
- Workflow
- Role
- Activities

Business Concepts
- About clarity in thinking and communication
- Terminology
- Relationships
- Thinking outside the box

Business Rules
- About guidance and control
- Constraints
- Business Logic
- Decisions

Requirements
- About what the system should do
- Automation
- Technology
- Specification

summary
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brsolutions.com  
(free)
training

- 2014 Instructor-Led Online Training Series ...
  - TBD ... Business Analysis with Business Rules: From Strategy to Requirements
  - April 9 – 10 ... Decision Analysis and Decision Tables: All About Modeling Decisions
find out more

Business Rule Solutions, LLC
www.BRSolutions.com

Business Rules & Decisions Forum 2013 conference
- Nov 11 – Nov 15 ... Las Vegas, Nevada

Rules Say Must Not!
request 30 minutes private consulting with us!
THANK YOU!

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